

# Work Order ID 97454

February-20-13 9:08:02 AM

**\*97454\***

Page 1

Item ID: D4666-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Armrest Assembly  
 Start Date: 2/20/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 3/05/13 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: 13-02-20 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
 Run Start **\*NR1\***  
 Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D4666	A								
100	Large Fab	0.00							
<b>*100*</b>									
Small Fab	Memo	0.00							
Small Fab	1- Cut tube at 38.00"								
	2- Bend tube as per dwg								
	3- Cut ends of tube to righth dimension as per dwg								
	4- Drill tube as per Dwg								
	6- Deburr								
120	QC6- Inspect dimensions to drawing	0.00							
<b>*120*</b>									
QC	Memo	0.00							
Quality Control									

(4) EL 13-2-21 PTO next page

(4) B-0222 DAS 09

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DOA: glt Date: 13/03/11QA Closed: ch Date: 13/3/7

Work Order: <u>97454</u> Part No. <u>D 4666-041</u> NCR No. <u>13-2377</u>				<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b> <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input checked="" type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
--	--	--	--	--	--	--	--	--	--	--	--

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input checked="" type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>	<u>12/02/21</u>	<u>100</u>	<u>4</u>	Took wrong material had to take M#130 D Tube .750 X .049 w and took #130 D Tube .750 X .083  R.C L40	DAS 16 9-89 AS7-42 13/12/22	Scrap & destroy <del>rework</del> rework it with right material  \$1161.38	FF 13-02-20  DAS 09 9-89 13-02-22	DAS 16 9-89 AS7-42 13/12/22	

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input checked="" type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input checked="" type="checkbox"/> Other <u>Took wrong material</u>



# Work Order ID 97454

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Item ID: D4666-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Armrest Assembly  
 Start Date: 2/20/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 3/05/13 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 <b>*130*</b> Powdercoat Powder Coating	Grey Sandtex (Ref 4.2.3.6) per QSI005 4.3 <i>Md 2966</i> Memo START TIME: <u>10:00</u> OVEN TEMPERATURE: <u>375°</u> FINISH TIME: <u>10:30</u>	0.00  0.00				<u>4</u>	<u>0</u>	<u>PL 13-2-27</u>	
140 <b>*140*</b> QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00		<u>DAS</u> <u>15</u> <u>2.27</u>		<u>4</u>			
150 <b>*150*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>ST 17</u>  Memo	0.00  0.00				<u>2/x</u>		<u>SP</u> <u>13-2-27</u>	

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	

**Work Order ID 97454****\*97454\***

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February-20-13 9:08:02 AM

Item ID: D4666-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Armrest Assembly  
Start Date: 2/20/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
Required Date: 3/05/13 Req'd Qty: 4.00 **\*4\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
<b>*160*</b>									
QC	Memo	0.00							
Quality Control									

\_\_\_\_\_ *MCS* *13 02-28*  
*MF*  
*13-2-28*

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-between;"> <div> Rework <input type="checkbox"/>  Scrap <input type="checkbox"/>  Use-as-is <input type="checkbox"/>  Work Order Update <input type="checkbox"/> </div> <div> Skid-tube <input type="checkbox"/>  Machining <input type="checkbox"/>  Thermoforming <input type="checkbox"/>  Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/>  Small Fab <input type="checkbox"/>  Finishing <input type="checkbox"/>  Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/>  Prod. Eng. Coord. <input type="checkbox"/>  Rec/Store/Packaging <input type="checkbox"/>  Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/>  Quality <input type="checkbox"/>  Other <input type="checkbox"/> </div> </div>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/>  Machining <input type="checkbox"/>  Thermoforming <input type="checkbox"/>  Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/>  Small Fab <input type="checkbox"/>  Finishing <input type="checkbox"/>  Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/>  Prod. Eng. Coord. <input type="checkbox"/>  Rec/Store/Packaging <input type="checkbox"/>  Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/>  Quality <input type="checkbox"/>  Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other		

# Picklist Print

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Page 1

Work Order ID: 97454

Parent Item: D4666-041

Parent Item Name: Armrest Assembly

Start Date: 2/20/13

Required Date: 3/05/13

Start Qty: 4.00

Required Qty: 4.00

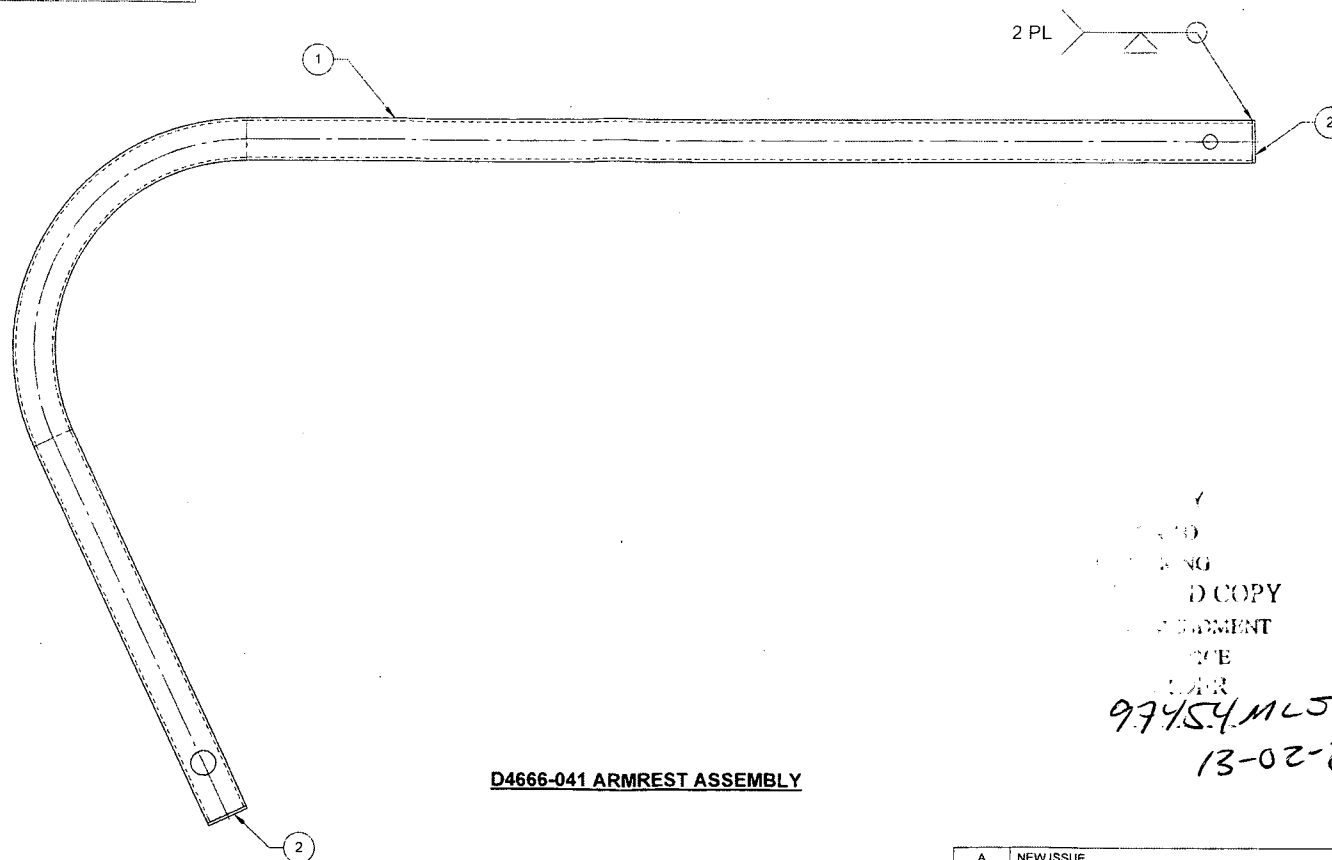
Comments: IPP REV:A 12.06.11 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3017-11 cap		Manufactured	No			124	Each	48.0000	2	8		13-0-21	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA002		48							
				91837		48							
M4130NT0.750W.049 4130 RD Tube .750 x.049W		Purchased	No			100	f	111.7718	3.17	13.347368		13-0-21	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT033		111.7717893							
				123339		9.6217893							
				124293		102.15							

M4130NT0.750W.049 M 124293 x 13.347368 scrap.



ITEM	QTY	P/N	DESCRIPTION
	X	D4666-041	ARMREST ASSEMBLY
1	1	D4666-1	ARMREST
2	2	D3017-11	END CAP



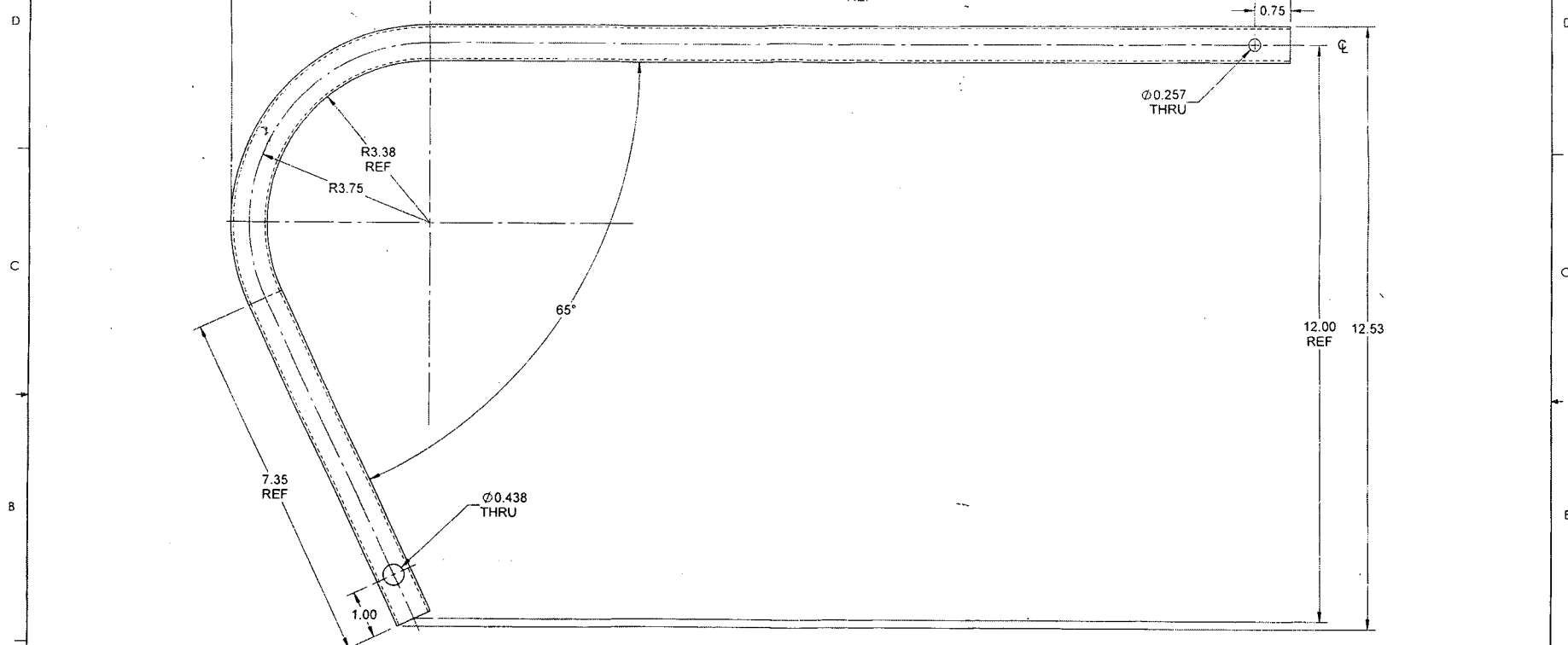
**D4666-041 ARMREST ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4666-041" AND B/N "BXXXXX" PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 1.01 lbs

**RELEASED**  
2012-07-09  
CP PER DEN 12-616

A		NEW/ISSUE		AJS		12.06.08	
REV.		DESCRIPTION		BY		DATE	
DESIGN	AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		REV. A		SHEET 1 OF 2	
DRAWN	AJS						
CHECKED	JP	DRAWING NO.		D4666		SCALE	
MFG. APPR.	JP	TITLE		ARMREST ASSEMBLY		NTS	
APPROVED	JP	DATE		12.06.08		COPYRIGHT © 2013 BY DART AEROSPACE LTD	
DE APPR.	JP					THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



**D4666-1 ARMREST**

NOTES:

- 1) MATERIAL: AISI 1130N SEAMLESS STEEL TUBING, Ø 0.750 X 0.049 WALL  
PER MIL-T-6736 OR AMS 6371/6360/6361/6362/6373/6374  
REF M4130NT0.750W.049
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.99 lbs
- 8) FLAT LENGTH 32.75 ESTIMATED

RELEASE  
2012-07-09  
UP

DESIGN	AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA  DRAWING NO. <b>D4666</b>  TITLE <b>ARMREST ASSEMBLY</b>  SCALE <b>NTS</b>
DRAWN	AJS	
CHECKED	<i>[Signature]</i>	
MFG. APPR.	<i>[Signature]</i>	
APPROVED	<i>[Signature]</i>	
DE APPR.	<i>[Signature]</i>	
DATE	12.06.08	COPYRIGHT © 2012 BY DART AEROSPACE LTD. <small>THIS DOCUMENT IS PRIVATE AND NOT BE LOANED, REPRODUCED OR DISCLOSED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.</small>